

# **HUMAN RESOURCE DEVELOPMENT FOR FUTURE BASIC OCCUPATIONAL HEALTH SERVICES IN MALAYSIA**

NIZA SAMSUDDIN, MBBS, PhD (CORRESPONDING AUTHOR)  
DEPARTMENT OF BIOMEDICAL SCIENCES, KULLIYAH OF ALLIED HEALTH  
SCIENCE, INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA, BANDAR INDERA  
MAHKOTA, 25200 KUANTAN, PAHANG.  
[niza\\_shamsuddin@iium.edu.my](mailto:niza_shamsuddin@iium.edu.my)

NOR AZLINA A RAHMAN (MBBS, M Com. Med.)  
DEPARTMENT OF PHYSICAL REHABILITATION SCIENCES, KULLIYAH OF  
ALLIED HEALTH SCIENCE, INTERNATIONAL ISLAMIC UNIVERSITY  
MALAYSIA, BANDAR INDERA MAHKOTA, 25200 KUANTAN, PAHANG.  
[nazara@iium.edu.my](mailto:nazara@iium.edu.my)

AILIN RAZALI (MBBS, PhD)  
DEPARTMENT OF OTOLARYNGOLOGY - HEAD AND NECK SURGERY,  
KULLIYAH OF MEDICINE, INTERNATIONAL ISLAMIC UNIVERSITY  
MALAYSIA, BANDAR INDERA MAHKOTA, 25200 KUANTAN, PAHANG.  
[ailin@iium.edu.my](mailto:ailin@iium.edu.my)

MUHAMMAD ZUBIR YUSOF (PhD)  
DEPARTMENT OF COMMUNITY MEDICINE, KULLIYAH OF MEDICINE,  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA, BANDAR INDERA  
MAHKOTA, 25200 KUANTAN, PAHANG.  
[zubiryusof@iium.edu.my](mailto:zubiryusof@iium.edu.my)

AHMAD FITRI ABDULLAH HAIR (MD)  
OCCUPATIONAL HEALTH DIVISION, DEPARTMENT OF OCCUPATIONAL  
SAFETY & HEALTH, LEVEL 4, BLOCK D4, COMPLEX D, FEDERAL GOVERNMENT  
ADMINISTRATIVE CENTRE, 62530, W.P.PUTRAJAYA.  
[ahmadfitri@mohr.gov.my](mailto:ahmadfitri@mohr.gov.my)

DAYANATH MANIVASAGAM (MD)  
OCCUPATIONAL HEALTH DIVISION, DEPARTMENT OF OCCUPATIONAL  
SAFETY & HEALTH, LEVEL 4, BLOCK D4, COMPLEX D, FEDERAL GOVERNMENT  
ADMINISTRATIVE CENTRE, 62530, W.P.PUTRAJAYA.  
[dayanath@mohr.gov.my](mailto:dayanath@mohr.gov.my)

RAJINDERJIT SINGH HULLON (MBBS)  
OCCUPATIONAL HEALTH DIVISION, DEPARTMENT OF OCCUPATIONAL  
SAFETY & HEALTH, LEVEL 4, BLOCK D4, COMPLEX D, FEDERAL GOVERNMENT  
ADMINISTRATIVE CENTRE, 62530, W.P.PUTRAJAYA.  
[rajinderjit@mohr.gov.my](mailto:rajinderjit@mohr.gov.my)

NIK MOHAMED NIZAN NIK MOHAMED (MBBS)  
MONTIQUE SDN BH, A37 FIRST FLOOR, LORONG TUN ISMAIL 10, 25000  
KUANTAN, PAHANG.  
[drnizan@gmail.com](mailto:drnizan@gmail.com)

## ABSTRACT

A guideline on Basic Occupational Health Services (BOHS) has been established jointly by ILO/WHO/ICOH in response to poor achievements of the Occupational Health Services (OHS), especially among workers in small and medium enterprises at the global level. Malaysia. The international guideline describes competent and skilled human resources as an essential strategy for BOHS implementation. This commentary will discuss the challenges faced by current occupational health personnel providing OHS in Malaysia and proposes improvements of human resource development for future BOHS in Malaysia to ensure fair and better OHS coverage for Malaysian workers.

**Keywords:** Basic Occupational Health Services (BOHS), Occupational Health Services (OHS), Small and Medium Enterprises (SMEs), Occupational Health Nurse (OHN), Occupational Health Doctor (OHD)

## INTRODUCTION

The achievements of providing Occupational Health Services (OHS) in many countries have been deemed unsatisfactory, especially among workers in small and medium enterprises (SMEs). In order to meet the global needs in providing better OHS, the World Health Organization (WHO), International Labour Organization (ILO), International Commission on Occupational Health (ICOH) and the Finnish Institute of Occupational Health (FIOH) have jointly published the Basic Occupational Health Services (BOHS) guidelines. The guidelines describe BOHS strategies for developing competent and skilled human resources and establishing good BOHS infrastructure, practices and policy (Rantanen, 2005; Rantanen, 2007).

The guidelines however did not articulate detailed human resource requirements for implementing BOHS. The requirements would vary according to the socio-economic panorama of different countries, types of industry, size and geography of the workplace. At the initial stage (Stage I), the requirement is at least one nurse and one safety officer who have received basic training in occupational health. For Stage II, the requirement is at least one doctor and one nurse working in primary health services. Stages III and IV are advanced stages that require various personnel to meet international standards and provide comprehensive services (Rantanen, 2005; Rantanen, 2007).

In 2018, Malaysia has a total population of 32.4 million, with 14.8 million employed (DOSM, 2018). In 2016, the total number of establishments and enterprises was 920,624; of this 98.5% were SMEs which contributed to over 65% of employment positions (SME, 2014; SME 2017). In response to the international BOHS guideline, OHS Guideline was established by the Department of Safety and Health (DOSH) of Malaysia to assist employers and occupational health practitioners in protecting and promoting the health of workers and improving the work environment (DOSH, 2005). Considering that OHS coverage is still low, DOSH Malaysia has also established BOHS guidelines with a focus on screening for occupational diseases among workers in SMEs (unpublished).

Medical doctors and staff nurses in DOSH carry out health surveillance activities among the employees in SMEs as part of BOHS implementation in Malaysia. There were 2,112 and 2,389 SME workers screened by DOSH in 2014 and 2015 respectively (DOSH, 2014; DOSH 2015). Nevertheless, the estimated coverage of screened SME workers is only about 0.01%. The shortage of human resources for BOHS programme implementation is one of several factors that contributed to the low BOHS coverage in Malaysia.

## OCCUPATIONAL HEALTH PERSONNEL AND TRAINING

In 2016, there were 1,073 DOSH officers in Malaysia; the number of medical doctors and staff nurses that run the BOHS programme is much lower. Most states' departments have one or two medical doctors and one staff nurse to serve the workers in their state. This deficiency leads to a heavy work load for DOSH officers carrying out enforcement, education, and a variety of occupational safety and health programmes. The 2016 report revealed that there were 550 Occupational Health Doctors (OHD) serving either in private primary health care services or solely providing OHS. Not all OHDs were actively conducting workers' health surveillance. Occupational Health Nurses (OHNs) are less involved in OHS in Malaysia. The number of nurses trained by the National Institute of Occupational Safety and Health (NIOSH) from 2013 to 2016 was only 261. The trained OHNs are commonly serving big industries in Malaysia. OHNs working independently or as part of a larger multiprofessional OH team, are the coordinator and frontliner in protecting and promoting the health of working populations (WHO, 2001).

In 2016, there were 2,232 registered Safety and Health Officers (SHO) in Malaysia. Following the provisions of the Occupational Safety and Health Act (OSHA) 1994, employers were required to appoint a Safety and Health Officer on a permanent basis in high-risk industries whose number of employees exceeds 100, and in low-risk industries employing more than 500. Most OHDs, OHNs, and SHOs serve only large and medium-sized companies, due to legislative requirements and the SMEs' financial constraints.

Malaysia has no specialized programme to train Occupational Health Physicians (OHPs), but a few universities in Malaysia have a four-year programme to produce Public Health Specialists (PHS) with a sub-specialty in occupational health. There is a certification procedure for a medical doctor to be trained to conduct health surveillance under the legal provisions of OSHA 1994. Medical doctors who wish to obtain this certification must attend training at NIOSH for nine days, pass the examination, and be appointed by the Director General of DOSH. There are no special provisions for OHDs or PHSs with a subspecialty in occupational health to manage the units in the Ministry of Health or the Ministry of Human Resources. Nevertheless, DOSH has consistently assisted the Ministry of Health in providing occupational health training for medical doctors who provide services for employees of the Ministry of Health.

Training to produce SHOs and OHNs is also provided by NIOSH. As with OHD, SHO is a qualification accredited by the Director General of DOSH. The official role of an OHN in Malaysia is less clear, as there is no provision in the OSHA 1994. Neither the Ministry of Health nor the Ministry of Human Resources require OHN qualifications to fill in specific positions. NIOSH provides a four-day training for staff nurses to become certified OHNs. OHS guidelines stipulate the roles of OHDs and OHNs, but the main obstacle to implementation is the financial constraint among the SMEs.

Taiwan's experience could serve as an example for Malaysia in facing under-diagnosis and under-reporting of occupational diseases. Taiwan is an island country located in East Asia with an estimated population of 23.5 million and high population density of 660 people per square km (World Population Review, 2016). Taiwan reports OHS coverage of 20% and notification of occupational diseases has increased significantly in recent years (Po-Ching Chu et al., 2013; Te-I Hsu, 2015). Taiwan has a structure similar to Malaysia's, with health and safety departments being under different ministries. However, Taiwan has succeeded in its OHS programme through the collaboration of safety and health departments. One of the crucial factors that contributed to the improvement of their OHS coverage is the notification system of occupational accidents and diseases. The notification system is called the Network of Occupational Disease and Injuries Service which the main concept is to establish a networking

system. The system has increased employees' visits to the outpatient clinic and the average number of employees attending the occupational clinic per week, with a significant number of reported cases of occupational diseases (Po-Ching Chu et al., 2013; Leon Guo and Po-Chin Chu, 2018). The strength of the OHS program in Taiwan is partly due to municipal governments, who have added more inspectors to improve enforcement and encouraged many academic institutes to train high-quality OSH professionals (Te-I Hsu, 2015). The Labour Ministry's National Occupational Safety and Health Profile of Taiwan (2014) reported that there were 301 OHPs, 837 OHDs, and 2,330 OHNs serving Taiwan.

## **STRATEGY TO EMPOWER OCCUPATIONAL HEALTH PERSONNEL IN MALAYSIA**

The apparent weaknesses of OHS in Malaysia are the small number and less prominent role of OHNs as the coordinator and front liner in giving OHS. OHS guidelines state that the requirement for OHNs should be on a permanent basis when the number of employees in an industry exceeds 50 (DOSH, 2005), and that SMEs with employees between 50 and 1,000 employees are advised to appoint an OHD on a part-time basis. Employers with over 1,000 employees must appoint an OHD working on a full-time basis, but these requirements have barely been followed due to factors such as financial constraints and ignorance, especially among the SMEs. The future BOHS programme should include OHN requirements in OSH legislation and improve the content and duration of training modules.

To increase OHS coverage especially among SMEs and civil servants, the government should create posts for OHNs and OHDs in public primary health services, the Ministry of Health, and the Occupational Health Division, DOSH and train more of them to run the BOHS programme. Without OHS services provided by the government clinics, the civil servants in particular are deprived of comprehensive primary health care services. Current government primary health care clinics offer no medical surveillance, fitness-to-work, return-to-work programmes, pre-placement and pre-retirement assessment for the public.

The current role of SHO is more focused on occupational safety; their knowledge in identifying health hazards in the workplace is limited. The SHO training module should have more occupational health content to empower the SHOs. Continuous professional training should also emphasize the field of occupational health. There is no clear provision in the law stating that an SHO is obligated to serve only one organization; thus, the responsible parties could enable an SHO to work on a part-time, 'sharing,' or 'roaming' basis to serve SMEs.

Generally, the training for medical doctors and nurses in the field of occupational health in Malaysia is very limited, still in its infancy, and underdeveloped. The quantity and quality of occupational health personnel are far behind in providing comprehensive and universal occupational health coverage for Malaysian employees. Future OHS in Malaysia must include strategies that empower occupational health personnel's role. OHs personnel development should be in line with a comprehensive BOHS programme strategic development that includes proper infrastructure provision, programme content, and policy (Samsuddin et al., 2019).

## **ACKNOWLEDGEMENT(S)**

The authors would like to acknowledge the funding support of this work by Department of Occupational Safety and Health Malaysia under the Research Development Project of 11<sup>th</sup> Malaysian Plan and IIUM Entrepreneurship and Consultancies Sdn. Bhd (Company No: 563743-P) as the consultant firm awarded by DOSH to manage this project (Contract No: DOSH/05/2016/OHSIKS) in addition to IIUM internal grant (RIGS16-116-0280). They also express thanks to the research assistants and everyone who contributed in the study.

## REFERENCES

- Department of Occupational Safety and Health (DOSH). (2005). Guidelines on Occupational Health Services. Department of Occupational Safety and Health, Ministry of Human Resources, Putrajaya, Malaysia.
- Department of Occupational Safety and Health (DOSH). (2014). Annual Report 2014. Department of Occupational Safety and Health, Ministry of Human Resources, Putrajaya, Malaysia.
- Department of Occupational Safety and Health (DOSH). (2015). Annual Report 2015. Department of Occupational Safety and Health, Ministry of Human Resources, Putrajaya, Malaysia.
- Department of Statistics, Malaysia (DOSM) (2018). Current Population Estimates, Malaysia, 2017–2018.
- Leon Guo and Po-Chin Chu. (2018). Impacts of Occupational Health Service network on reporting occupational diseases. *Occup. Environ Med.* 75 (Suppl 2): A1–A650. <http://dx.doi.org/10.1136/oemed-2018-ICOHabstracts.367>
- National Occupational Safety and Health Profile of Taiwan, Occupational Safety and Health Administration, Ministry of Labour, Republic of China (Taiwan), 2014.
- Occupational Safety and Health (Safety and Health Officer) Order 1997, Occupational Safety and Health Act 1994 (Act No. 514).
- Occupational Safety and Health (Use and Standards of Exposure to Chemicals Hazardous to Health) Regulations 2000, Occupational Safety and Health Act 1994 (Act No. 514).
- Po-Ching Chu, Hwan-Ran Fuh, Jiin-Chyuan Luo, Chung-Li Du, Hung-Yi Chuang, How-Ran Guo, et al. (2013). The impact of Occupational Health Service network and reporting system in Taiwan. *International Journal of Occupational and Environmental Health* 19(4):352–362.
- Rantanen, J. (2005). Basic occupational health services: Their structure, content and objectives. *Scandinavian Journal of Work, Environment & Health Supplements*. 1:5–15.
- Rantanen, J. (2007). *Basic Occupational Health Services: A WHO/ILO/ICOH/FIOH Guideline*. (3rd ed.) Helsinki (Finland): Finish Institute of Occupational Health.
- Samsuddin N, Razali A, Ab Rahman NA, Yusof MZ, Nik Mahmood NAK, Abdullah Hair AF (2019). The proposed future infrastructure model for basic occupational health services in Malaysia. *Malays J Med Sci.* 26(2):131–137. URL: <https://doi.org/10.21315/mjms2019.26.2.14>.
- Small Medium Enterprises Corporation Malaysia (SME). (2014). SME Annual Report 2013.
- Small Medium Enterprises Corporation Malaysia (SME). (2017). SME Annual Report 2016–2017.
- Te-I Hsu. (2015). Occupational Safety and Health Profile of Taiwan. Industrial Safety and Health Association Taiwan, Administrator, Kaohsiung Branch, Industrial Safety and Health Association, Taiwan. Available at: <https://www.jisha.or.jp/international/co-ope/pdf/OSH%20report%20of%20Taiwan-Te-I%20Hsu-2015.03.pdf>
- World Health Organization (WHO) (2001). The Role of the Occupational Health Nurse in Workplace Health Management, WHO Regional Office for Europe, Copenhagen
- World Population Review (2016). Taiwan population. Available at: <http://worldpopulationreview.com/countries/taiwan-population/>